

ABSTRACT

A novel process and apparatus are disclosed for cleaning wastewater containing metal ions in solution, hydrogen peroxide, and high solids, e.g., greater than about 50 mg/l particulate 5 solids. A carbon adsorption column removes hydrogen peroxide in the wastewater feed containing high solids. A chemical precipitation unit removes the metal ions from solution. The process and apparatus remove metal ions such as copper from a high solids byproduct polishing slurry from the chemical mechanical polishing 10 (CMP) of integrated circuit microchips to form an environmentally clean wastewater discharge.